

Figure 6 shows the effect of the concentration of the monomer on the polymerization rate. The rate increases with increasing monomer concentration, and the reaction order with respect to the monomer concentration was determined to be 0.78.

A compact video image recording device which is mountable to a gun and useful for recording video images before and after the firing of the gun. The recording device includes a camera comprising a lens and a video image sensor. The video recording device is mounted on the gun such that the viewing area of the camera includes the target area of the gun. The video image sensor generates an electronic signal representative of a video image impinging the respective sensor. The output of the image sensor is processed and generally employed to produce frame data which are successively stored in successive frame locations of a semiconductor memory organized as a circular buffer memory while the video recording device is in an active state. Upon the firing of the gun, additional frames are stored in the buffer memory for a short period of time and a portion of the buffer memory is employed to preserve a video record of the shooting both before and after the event. Additional frames are successively stored in the unused portion of the buffer memory. In the event of a further firing of the gun, an additional portion of the buffer memory is dedicated to preserving the image data associated with subsequent firing incident. This process may be repeated until the buffer memory is full in the event the gun is repeatedly fired. A video record is thus generated which documents the circumstances preceding and following the firing of the gun.